



High Performance Cutting Tools



**HIGH SPEED STEEL DRILLS**


# ICON GALLERY


## TOOL MATERIAL

**HSS** High Speed Steel

**HSS Co** High Speed Steel - Cobalt

## POINT ANGLE

 118 Degree

 135 Degree

## STANDARD

**BS 328** BS328

**DIN 338** DIN338

**DIN 340** DIN340

**DIN 345** DIN345

**DIN 1897** DIN1897

**IS 494** IS494

**IS 5102** IS5102

**IS 5100** IS5100

**IS 5103** IS5103

**IS 5101** IS5101

## HELIX ANGLE

 30°


## SURFACE TREATMENT

**BF** Bright Finish

**TiN** Titanium Nitride Coating

**BL** Bright Land, Bright Shank

## TOLERANCE

 Shank Tolerance

## TOOL TYPE

**N** Normal

**S** Split

## DRILL LENGTH

**STUB** Stub Length

**REG** Regular Length

**LONG** Long Length



High Performance Cutting Tools



**HIGH SPEED STEEL DRILLS**

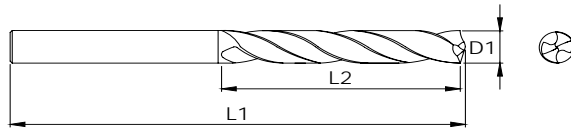


## HIGH SPEED STEEL DRILLS

	STANDARD	MATERIAL	SURFACE FINISH	POINT ANGLE	LENGTH	PAGES
Metric/Inch	DIN338 / IS 5101	HSS	Bright	118°	Standard	7.003
Metric/Inch	DIN1897 / IS 5100	HSS	Bright	118°	Stub	7.007
Metric	DIN340 / IS 5102	HSS	Bright	118°	Long Series	7.011
Metric	DIN338 / IS 5101	HSS-Co	Bright	118°	Standard	7.014
Metric	DIN338 / IS 5101	HSS-Co	Bright	135°	Standard	7.017
Metric	Reduced Shank	HSS	Bright	118°	152mm	7.020
Metric	DIN345 / IS 5103	HSS	Bright	118°	Standard	7.021
Inch	DIN345 / IS 5103	HSS	Bright	118°	Standard	7.024
Metric/Inch	DIN338 / IS 5103 Case Sets	HSS	Bright	118°	Standard	7.025



## Parallel shank jobber drill



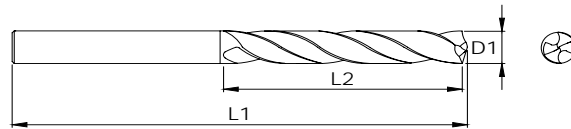
Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
1.0		FBR0200001	12	34
1.1		FBR0200002	14	36
1.2		FBR0200003	16	38
1.3		FBR0200004	16	38
1.4		FBR0200005	18	40
1.59	1/16"	FBR0200158	20	43
1.5		FBR0200006	18	40
1.6		FBR0200007	20	43
1.7		FBR0200008	20	43
1.8		FBR0200009	22	46
1.9		FBR0200010	22	46
1.98	5/64"	FBR0200159	24	49
2.0		FBR0200011	24	49
2.1		FBR0200012	24	49
2.2		FBR0200013	27	53
2.3		FBR0200014	27	53
2.38	3/32"	FBR0200160	30	57
2.4		FBR0200015	30	57
2.5		FBR0200016	30	57
2.6		FBR0200017	30	57
2.7		FBR0200018	33	61
2.78	7/64"	FBR0200103	33	61
2.8		FBR0200019	33	61
2.9		FBR0200020	33	61
3.0		FBR0200021	33	61

Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
3.1		FBR0200022	36	65
3.17	1/8"	FBR0200102	36	65
3.2		FBR0200023	36	65
3.3		FBR0200024	36	65
3.4		FBR0200025	39	70
3.5		FBR0200026	39	70
3.57	9/64"	FBR0200104	39	70
3.6		FBR0200027	39	70
3.7		FBR0200028	39	70
3.8		FBR0200029	43	75
3.9		FBR0200030	43	75
3.97	5/32"	FBR0200105	43	75
4.0		FBR0200031	43	75
4.1		FBR0200032	43	75
4.2		FBR0200033	43	75
4.3		FBR0200034	47	80
4.37	11/64"	FBR0200106	47	80
4.4		FBR0200035	47	80
4.5		FBR0200036	47	80
4.6		FBR0200037	47	80
4.7		FBR0200038	47	80
4.76	3/16"	FBR0200107	52	86
4.8		FBR0200039	52	86
4.9		FBR0200040	52	86
5.0		FBR0200041	52	86

Unit : mm



## Parallel shank jobber drill



Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
5.1		FBR0200042	52	86
5.16	13/64"	FBR0200109	52	86
5.2		FBR0200043	52	86
5.3		FBR0200044	52	86
5.4		FBR0200045	57	93
5.5		FBR0200046	57	93
5.56	7/32"	FBR0200161	57	93
5.6		FBR0200047	57	93
5.7		FBR0200048	57	93
5.8		FBR0200049	57	93
5.9		FBR0200050	57	93
5.95	15/64"	FBR0200282	57	93
6.0		FBR0200051	57	93
6.1		FBR0200052	63	101
6.2		FBR0200053	63	101
6.3		FBR0200054	63	101
6.35	1/4"	FBR0200108	63	101
6.4		FBR0200055	63	101
6.5		FBR0200056	63	101
6.6		FBR0200057	63	101
6.7		FBR0200058	63	101
6.75	17/64"	FBR0200110	69	109
6.8		FBR0200059	69	109

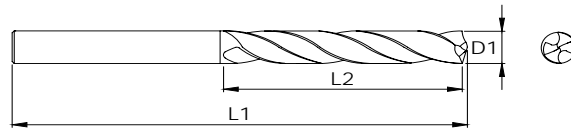
Unit : mm

Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
6.9		FBR0200060	69	109
7.0		FBR0200061	69	109
7.1		FBR0200062	69	109
7.14	9/32"	FBR0200162	69	109
7.2		FBR0200063	69	109
7.3		FBR0200064	69	109
7.4		FBR0200065	69	109
7.5		FBR0200066	69	109
7.54	19/64"	FBR0200163	75	117
7.6		FBR0200067	75	117
7.7		FBR0200068	75	117
7.8		FBR0200069	75	117
7.9		FBR0200070	75	117
7.94	5/16"	FBR0200111	75	117
8.0		FBR0200071	75	117
8.1		FBR0200072	75	117
8.2		FBR0200073	75	117
8.3		FBR0200074	75	117
8.33	21/64"	FBR0200112	75	117
8.4		FBR0200075	75	117
8.5		FBR0200076	75	117
8.6		FBR0200077	81	125
8.7		FBR0200078	81	125

Unit : mm



## Parallel shank jobber drill



Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
8.73	11/32"	FBR0200164	81	125
8.8		FBR0200079	81	125
8.9		FBR0200080	81	125
9.0		FBR0200081	81	125
9.1		FBR0200082	81	125
9.13	23/64"	FBR0200165	81	125
9.2		FBR0200083	81	125
9.3		FBR0200084	81	125
9.4		FBR0200085	81	125
9.5		FBR0200086	81	125
9.52	3/8"	FBR0200113	87	133
9.6		FBR0200087	87	133
9.7		FBR0200088	87	133
9.8		FBR0200089	87	133
9.9		FBR0200090	87	133
9.92	25/64"	FBR0200283	87	133
10.0		FBR0200091	87	133
10.1		FBR0200264	87	133
10.2		FBR0200092	87	133
10.3		FBR0200265	87	133
10.32	13/32"	FBR0200284	87	133
10.4		FBR0200266	87	133
10.5		FBR0200093	87	133

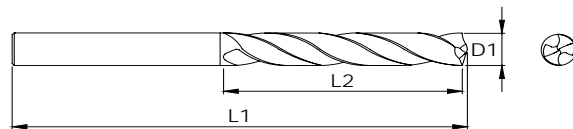
Unit : mm

Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
10.6		FBR0200141	87	133
10.7		FBR0200094	94	142
10.72	27/64"	FBR0200285	94	142
10.8		FBR0200095	94	142
10.9		FBR0200267	94	142
11.0		FBR0200096	94	142
11.1		FBR0200268	94	142
11.11	7/16"	FBR0200114	94	142
11.2		FBR0200269	94	142
11.3		FBR0200270	94	142
11.4		FBR0200271	94	142
11.5		FBR0200097	94	142
11.51	29/64"	FBR0200286	94	142
11.6		FBR0200272	94	142
11.7		FBR0200273	94	142
11.8		FBR0200098	94	142
11.9		FBR0200274	101	151
11.91	15/32"	FBR0200287	101	151
12.0		FBR0200099	101	151
12.1		FBR0200275	101	151
12.2		FBR0200276	101	151
12.3		FBR0200277	101	151
12.30	31/64"	FBR0200288	101	151

Unit : mm



## Parallel shank jobber drill



Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
12.4		FBR0200278	101	151
12.5		FBR0200100	101	151
12.6		FBR0200142	101	151
12.7		FBR0200279	101	151
12.7	1/2"	FBR0200115	101	151
12.8		FBR0200280	101	151
12.9		FBR0200281	101	151
13.0		FBR0200101	101	151
13.1	33/64"	FBR0200289	101	151
13.5		FBR0200143	108	160
13.49	17/32"	FBR0200290	108	160
13.89	35/64"	FBR0200291	108	160
14.0		FBR0200144	108	160
14.29	9/16"	FBR0200292	114	169
14.50		FBR0200145	114	169
14.68	37/64"	FBR0200293	114	169
15.0		FBR0200146	114	169
15.08	19/32"	FBR0200294	120	178
15.48	39/64"	FBR0200295	120	178
15.5		FBR0200147	120	178
15.87	5/8"	FBR0200296	120	178
16.0		FBR0200148	120	178

Unit : mm

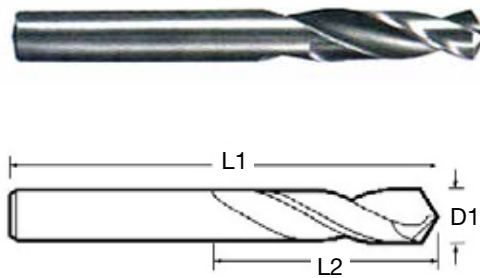
Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
16.50		FBR0200149	125	184
16.67	21/32"	FBR0200297	125	184
17.0		FBR0200150	125	184
17.46	11/16"	FBR0200298	125	184
17.50		FBR0200151	130	191
18.0		FBR0200152	130	191
18.26	23/32"	FBR0200299	130	191
18.50		FBR0200153	135	198
19.0		FBR0200154	135	198
19.05	3/4"	FBR0200300	135	198
19.50		FBR0200155	140	205
18.84	25/32"	FBR0200301	140	205
20.00		FBR0200156	140	205
20.64	13/16"	FBR0200302	140	205

Unit : mm





## Parallel shank stub drill



Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
1.0		FBR0200313	6	26
1.1		FBR0200314	7	18
1.19	3/64"	FBR0200940	8	30
1.2		FBR0200315	8	30
1.3		FBR0200316	8	30
1.4		FBR0200317	9	32
1.5		FBR0200318	9	32
1.59	1/16"	FBR0200941	10	34
1.6		FBR0200319	10	34
1.7		FBR0200320	10	34
1.8		FBR0200321	11	36
1.9		FBR0200322	12	36
1.98	5/64"	FBR0200942	12	38
2.0		FBR0200323	12	38
2.1		FBR0200324	12	38
2.2		FBR0200325	13	40
2.3		FBR0200326	13	40
2.38	3/32"	FBR0200943	14	43
2.4		FBR0200327	14	43
2.5		FBR0200328	14	43
2.6		FBR0200329	14	43

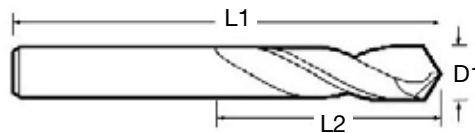
Unit : mm

Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
2.7		FBR0200330	16	46
2.78	7/64"	FBR0200944	16	46
2.8		FBR0200331	16	46
2.9		FBR0200332	16	46
3.0		FBR0200333	16	46
3.1		FBR0200334	18	49
3.17	1/8"	FBR0200450	18	49
3.2		FBR0200335	18	49
3.3		FBR0200336	18	49
3.4		FBR0200337	20	52
3.5		FBR0200338	20	52
3.57	9/64"	FBR0200451	20	52
3.6		FBR0200339	20	52
3.7		FBR0200340	20	52
3.8		FBR0200341	22	55
3.9		FBR0200342	22	55
3.97	5/32"	FBR0200452	22	55
4.0		FBR0200343	22	55
4.1		FBR0200344	22	55
4.2		FBR0200345	22	55
4.3		FBR0200346	24	58

Unit : mm



## Parallel shank stub drill



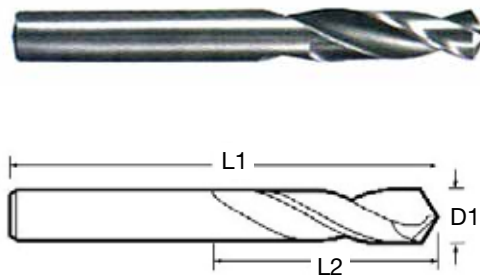
Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
4.37	11/64"	FBR0200453	24	58
4.4		FBR0200347	24	58
4.5		FBR0200348	24	58
4.6		FBR0200349	24	58
4.7		FBR0200350	24	58
4.76	3/16"	FBR0200454	26	62
4.8		FBR0200351	26	62
4.9		FBR0200352	26	62
5.0		FBR0200353	26	62
5.1		FBR0200354	26	62
5.16	13/64"	FBR0200456	26	62
5.2		FBR0200355	26	62
5.3		FBR0200356	26	62
5.4		FBR0200357	28	66
5.5		FBR0200358	28	66
5.56	7/32"	FBR0200945	28	66
5.6		FBR0200359	28	66
5.7		FBR0200360	28	66
5.8		FBR0200361	28	66
5.95	15/64"	FBR0200946	28	66
5.9		FBR0200362	28	66
6.0		FBR0200363	28	66

Unit : mm

Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
6.1		FBR0200364	31	70
6.35	1/4"	FBR0200455	31	70
6.2		FBR0200365	31	70
6.3		FBR0200366	31	70
6.4		FBR0200367	31	70
6.5		FBR0200368	31	70
6.6		FBR0200369	31	70
6.7		FBR0200370	34	74
6.75	17/64"	FBR0200947	34	74
6.8		FBR0200371	34	74
6.9		FBR0200372	34	74
7.0		FBR0200373	34	74
7.1		FBR0200374	34	74
7.14	9/32"	FBR0200948	34	74
7.2		FBR0200375	34	74
7.3		FBR0200376	34	74
7.4		FBR0200377	34	74
7.5		FBR0200378	34	74
7.54	19/64"	FBR0200949	37	79
7.6		FBR0200379	37	79
7.7		FBR0200380	37	79
7.8		FBR0200381	37	79

Unit : mm

## Parallel shank stub drill



Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
7.9		FBR0200382	37	79
7.94	5/16"	FBR0200457	37	79
8.0		FBR0200383	37	79
8.1		FBR0200384	37	79
8.2		FBR0200385	37	79
8.3		FBR0200386	37	79
8.33	21/64"	FBR0200950	37	79
8.4		FBR0200387	37	79
8.5		FBR0200388	37	79
8.6		FBR0200389	40	84
8.7		FBR0200390	40	84
8.73	11/32"	FBR0200951	40	84
8.8		FBR0200391	40	84
8.9		FBR0200392	40	84
9.0		FBR0200393	40	84
9.1		FBR0200394	40	84
9.13	23/64"	FBR0200952	40	84
9.2		FBR0200395	40	84
9.3		FBR0200396	40	84
9.4		FBR0200397	40	84
9.5		FBR0200398	40	84
9.52	3/8"	FBR0200458	43	89

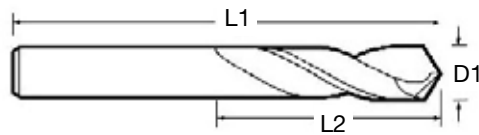
Unit : mm

Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
9.6		FBR0200399	43	89
9.7		FBR0200400	43	89
9.8		FBR0200401	43	89
9.9		FBR0200402	43	89
9.92	25/64	FBR0200953	43	89
10.0		FBR0200403	43	89
10.1		FBR0200404	43	89
10.2		FBR0200405	43	89
10.3		FBR0200406	43	89
10.32	13/32"	FBR0200954	43	89
10.4		FBR0200407	43	89
10.5		FBR0200408	43	89
10.72	27/64"	FBR0200955	47	95
10.6		FBR0200409	47	95
10.7		FBR0200410	47	95
10.8		FBR0200411	47	95
10.9		FBR0200412	47	95
11.0		FBR0200413	47	95
11.1		FBR0200414	47	95
11.11	7/16"	FBR0200459	47	95
11.2		FBR0200415	47	95
11.3		FBR0200416	47	95

Unit : mm



## Parallel shank stub drill



Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
11.4		FBR0200417	47	95
11.5		FBR0200418	47	95
11.51	29/64"	FBR0200956	47	95
11.6		FBR0200419	51	102
11.7		FBR0200420	51	102
11.8		FBR0200421	51	102
11.9		FBR0200422	51	102
11.91	15/32"	FBR0200957	51	102
12.0		FBR0200423	51	102
12.1		FBR0200424	51	102
12.2		FBR0200425	51	102
12.3		FBR0200426	51	102
12.4		FBR0200427	51	102
12.5		FBR0200428	51	102
12.6		FBR0200429	51	102
12.7	1/2"	FBR0200430	51	102
12.8		FBR0200431	51	102
12.9		FBR0200432	51	102

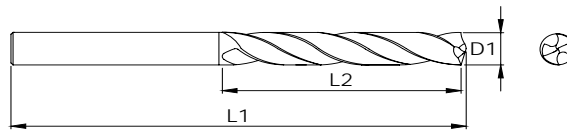
Unit : mm

Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
13.0		FBR0200433	51	102
13.5		FBR0200435	54	107
14.0		FBR0200437	54	107
14.28	9/16"	FBR0200940	56	111
14.5		FBR0200438	56	111
15.0		FBR0200439	56	111
15.5		FBR0200440	58	115
16.0		FBR0200441	58	115
16.5		FBR0200442	60	119
17.0		FBR0200443	60	119
17.5		FBR0200444	62	123
18.0		FBR0200445	62	123
18.5		FBR0200446	64	127
19.0		FBR0200447	64	127
19.5		FBR0200448	66	131
20.0		FBR0200449	66	131

Unit : mm



## Parallel shank long drill



Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
1.0	-	FBR0200958	33	56
1.1	-	FBR0200959	37	60
1.19	3/64"	FBR0200960	41	65
1.2	-	FBR0200961	41	65
1.3	-	FBR0200962	41	65
1.4	-	FBR0200963	45	70
1.5	-	FBR0200964	45	70
1.59	1/16"	FBR0200965	50	76
1.6	-	FBR0200966	50	76
1.8	-	FBR0200967	53	80
1.9	-	FBR0200968	53	80
1.98	5/64"	FBR0200969	56	85
2.0	-	FBR0200561	56	85
2.1	-	FBR0200970	56	85
2.2	-	FBR0200971	59	90
2.3	-	FBR0200972	59	90
2.38	3/32"	FBR0200973	62	95
2.4	-	FBR0200974	62	95
2.5	-	FBR0200562	62	95
2.6	-	FBR0200975	62	95
2.7	-	FBR0200976	66	100
2.78	7/64"	FBR0200977	66	100
2.8	-	FBR0200978	66	100
2.9	-	FBR0200979	66	100
3.0	-	FBR0200563	66	100

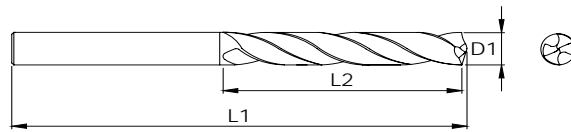
Unit : mm

Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
3.1	-	FBR0200980	69	106
3.17	1/8"	FBR0200981	69	106
3.2	-	FBR0200982	69	106
3.3	-	FBR0200983	69	106
3.4	-	FBR0200984	73	112
3.5	-	FBR0200564	73	112
3.6	-	FBR0200985	73	112
3.7	-	FBR0200986	73	112
3.8	-	FBR0200987	78	119
3.9	-	FBR0200988	78	119
3.97	5/32"	FBR0200989	78	119
4.0	-	FBR0200565	78	119
4.1	-	FBR0200990	78	119
4.2	-	FBR0200991	78	119
4.3	-	FBR0200992	82	126
4.37	11/64"	FBR0200993	82	126
4.4	-	FBR0200994	82	126
4.5	-	FBR0200566	82	126
4.6	-	FBR0200995	82	126
4.7	-	FBR0200996	82	126
4.76	5/16"	FBR0200997	87	132
4.8	-	FBR0200998	87	132
4.9	-	FBR0200999	87	132
5.0	-	FBR0200567	87	132
5.1	-	FBR0201000	87	132

Unit : mm



## Parallel shank long drill



Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
5.16	13/64	FBR0201001	87	132
5.2	-	FBR0201002	87	132
5.3	-	FBR0201003	87	132
5.4	-	FBR0201004	91	139
5.5	-	FBR0201005	91	139
5.56	7/32"	FBR0201006	91	139
5.6	-	FBR0201007	91	139
5.7	-	FBR0201008	91	139
5.8	-	FBR0201009	91	139
5.9	-	FBR0201010	91	139
5.95	15/64"	FBR0201011	91	139
6.0	-	FBR0200568	91	139
6.1	-	FBR0201012	97	148
6.2	-	FBR0201013	97	148
6.3	-	FBR0201014	97	148
6.35	1/4"	FBR0201015	97	148
6.4	-	FBR0201016	97	148
6.5	-	FBR0201017	97	148
6.6	-	FBR0201018	97	148
6.7	-	FBR0201019	97	148
6.75	17/64"	FBR0201020	102	156
6.8	-	FBR0201021	102	156
6.9	-	FBR0201022	102	156
7.0	-	FBR0201023	102	156
7.1	-	FBR0201024	102	156

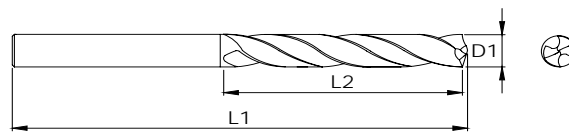
Unit : mm

Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
7.14	9/32"	FBR0201025	102	156
7.2	-	FBR0201026	102	156
7.3	-	FBR0201027	102	156
7.4	-	FBR0201028	102	156
7.5	-	FBR0201029	102	156
7.54	19/64"	FBR0201030	109	165
7.6	-	FBR0201031	109	165
7.7	-	FBR0201032	109	165
7.8	-	FBR0201033	109	165
7.9	-	FBR0201034	109	165
7.94	5/16"	FBR0201035	109	165
8.0	-	FBR0201036	109	165
8.1	-	FBR0201037	109	165
8.2	-	FBR0201038	109	165
8.3	-	FBR0201039	109	165
8.33	21/64"	FBR0201040	109	165
8.4	-	FBR0201041	109	165
8.5	-	FBR0201042	109	165
8.6	-	FBR0201043	115	175
8.7	-	FBR0201044	115	175
8.73	11/32"	FBR0201045	115	175
8.8	-	FBR0201046	115	175
8.9	-	FBR0201047	115	175
9.0	-	FBR0201048	115	175
9.1	-	FBR0201049	115	175

Unit : mm



## Parallel shank long drill



Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
9.13	23/64"	FBR0201050	115	175
9.2	-	FBR0201051	115	175
9.3	-	FBR0201052	115	175
9.4	-	FBR0201053	115	175
9.5	-	FBR0201054	115	175
9.52	3/8"	FBR0201055	121	184
9.6	-	FBR0201056	121	184
9.7	-	FBR0201057	121	184
9.8	-	FBR0201058	121	184
9.9	-	FBR0201059	121	184
9.92	25/64"	FBR0201060	121	184
10.0	-	FBR0201061	121	184
10.1	-	FBR0201062	121	184
10.2	-	FBR0201063	121	184
10.3	-	FBR0201064	121	184
10.32	13/32"	FBR0201065	121	184
10.4	-	FBR0201066	121	184
10.5	-	FBR0201067	121	184
10.6	-	FBR0201068	121	184
10.7	-	FBR0201069	128	195
10.72	27/64	FBR0201070	128	195
10.8	-	FBR0201071	128	195
10.9	-	FBR0201072	128	195

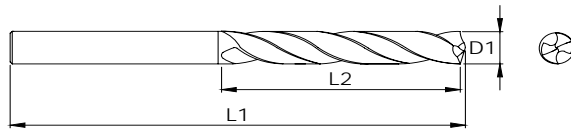
Unit : mm

Diameter ØD1		EDP No	Flute Length	Overall Length
mm	inch		L2	L1
11.0	-	FBR0201073	128	195
11.11	7/16"	FBR0201074	128	195
11.2	-	FBR0201075	128	195
11.3	-	FBR0201076	128	195
11.4	-	FBR0201077	128	195
11.5	-	FBR0201078	128	195
11.51	29/64"	FBR0201079	128	195
11.6	-	FBR0201080	128	195
11.7	-	FBR0201081	128	195
11.8	-	FBR0201082	128	195
11.9	-	FBR0201083	134	205
11.91	15/32"	FBR0201084	134	205
12.0	-	FBR0201085	134	205
12.1	-	FBR0201086	134	205
12.2	-	FBR0201087	134	205
12.3	31/64"	FBR0201088	134	205
12.4	-	FBR0201089	134	205
12.5	-	FBR0201090	134	205
12.6	-	FBR0201091	134	205
12.7	1/2"	FBR0201092	134	205
12.8	-	FBR0201093	134	205
12.9	-	FBR0201094	134	205
13.0	-	FBR0201095	134	205

Unit : mm



## Parallel shank jobber drill



Diameter	Bright	TiN Coated	Flute Length	Overall Length
ØD1	EDP No	EDP No	L2	L1
1.0	FBR0201096	FBR0201195	12	34
1.1	FBR0201097	FBR0201196	14	36
1.2	FBR0200501	FBR0201197	16	38
1.3	FBR0201098	FBR0201198	16	38
1.4	FBR0201099	FBR0201199	18	40
1.5	FBR0200502	FBR0201200	18	40
1.6	FBR0201100	FBR0201201	20	43
1.7	FBR0201101	FBR0201202	20	43
1.8	FBR0201102	FBR0201203	22	46
1.9	FBR0201103	FBR0201204	22	46
2.0	FBR0200503	FBR0201205	24	49
2.1	FBR0201104	FBR0201206	24	49
2.2	FBR0201105	FBR0201207	27	53
2.3	FBR0201106	FBR0201208	27	53
2.4	FBR0201107	FBR0201209	30	57
2.5	FBR0200544	FBR0201210	30	57
2.6	FBR0201108	FBR0201211	30	57
2.7	FBR0201109	FBR0201212	33	61
2.8	FBR0201110	FBR0201213	33	61
2.9	FBR0201111	FBR0201214	33	61
3.0	FBR0200504	FBR0201215	33	61
3.1	FBR0201112	FBR0201216	36	65
3.2	FBR0200505	FBR0201217	36	65
3.3	FBR0200535	FBR0201218	36	65
3.4	FBR0201113	FBR0201219	39	70

Unit : mm

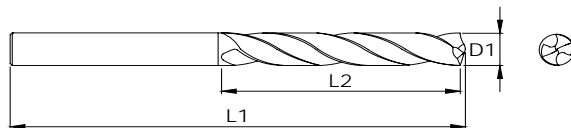
Diameter	Bright	TiN Coated	Flute Length	Overall Length
ØD1	EDP No	EDP No	L2	L1
3.5	FBR0200506	FBR0201220	39	70
3.6	FBR0201114	FBR0201221	39	70
3.7	FBR0201115	FBR0201222	39	70
3.8	FBR0201116	FBR0201223	43	75
3.9	FBR0201117	FBR0201224	43	75
4.0	FBR0200507	FBR0201225	43	75
4.1	FBR0201118	FBR0201226	43	75
4.2	FBR0200508	FBR0201227	43	75
4.3	FBR0201119	FBR0201228	47	80
4.4	FBR0201120	FBR0201229	47	80
4.5	FBR0200509	FBR0201230	47	80
4.6	FBR0201121	FBR0201231	47	80
4.7	FBR0201122	FBR0201232	47	80
4.8	FBR0201123	FBR0201233	52	86
4.9	FBR0201124	FBR0201234	52	86
5.0	FBR0200510	FBR0201235	52	86
5.1	FBR0201125	FBR0201236	52	86
5.2	FBR0201126	FBR0201237	52	86
5.3	FBR0201127	FBR0201238	52	86
5.4	FBR0201128	FBR0201239	57	93
5.5	FBR0200536	FBR0201240	57	93
5.6	FBR0201129	FBR0201241	57	93
5.7	FBR0201130	FBR0201242	57	93
5.8	FBR0201131	FBR0201243	57	93
5.9	FBR0201132	FBR0201244	57	93

Unit : mm





## Parallel shank jobber drill



Diameter	Bright	TiN Coated	Flute Length	Overall Length
ØD1	EDP No	EDP No	L2	L1
6.0	FBR0200511	FBR0201245	57	93
6.1	FBR0201133	FBR0201246	63	101
6.2	FBR0201134	FBR0201247	63	101
6.3	FBR0201135	FBR0201248	63	101
6.4	FBR0201136	FBR0201249	63	101
6.5	FBR0200537	FBR0201250	63	101
6.6	FBR0201137	FBR0201251	63	101
6.7	FBR0201138	FBR0201252	63	101
6.8	FBR0200512	FBR0201253	69	109
6.9	FBR0201139	FBR0201254	69	109
7.0	FBR0200538	FBR0201255	69	109
7.1	FBR0201140	FBR0201256	69	109
7.2	FBR0201141	FBR0201257	69	109
7.3	FBR0201142	FBR0201258	69	109
7.4	FBR0201143	FBR0201259	69	109
7.5	FBR0201144	FBR0201260	69	109
7.6	FBR0201145	FBR0201261	75	117
7.7	FBR0201146	FBR0201262	75	117
7.8	FBR0201147	FBR0201263	75	117
7.9	FBR0201148	FBR0201264	75	117
8.0	FBR0200513	FBR0201265	75	117
8.1	FBR0201149	FBR0201266	75	117
8.2	FBR0201150	FBR0201267	75	117
8.3	FBR0201151	FBR0201268	75	117
8.4	FBR0201152	FBR0201269	75	117

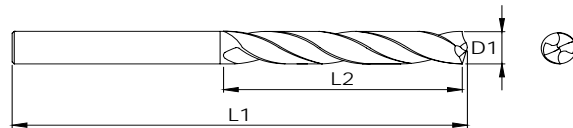
Unit : mm

Diameter	Bright	TiN Coated	Flute Length	Overall Length
ØD1	EDP No	EDP No	L2	L1
8.5	FBR0200539	FBR0201270	75	117
8.6	FBR0201153	FBR0201271	81	125
8.7	FBR0201154	FBR0201272	81	125
8.8	FBR0201155	FBR0201273	81	125
8.9	FBR0201156	FBR0201274	81	125
9.0	FBR0200540	FBR0201275	81	125
9.1	FBR0201157	FBR0201276	81	125
9.2	FBR0201158	FBR0201277	81	125
9.3	FBR0201159	FBR0201278	81	125
9.4	FBR0201160	FBR0201279	81	125
9.5	FBR0201161	FBR0201280	81	125
9.6	FBR0201162	FBR0201281	87	133
9.7	FBR0201163	FBR0201282	87	133
9.8	FBR0201164	FBR0201283	87	133
9.9	FBR0201165	FBR0201284	87	133
10.0	FBR0201166	FBR0201285	87	133
10.1	FBR0201167	FBR0201286	87	133
10.2	FBR0201168	FBR0201287	87	133
10.3	FBR0201169	FBR0201288	87	133
10.4	FBR0201170	FBR0201289	87	133
10.5	FBR0200541	FBR0201290	87	133
10.6	FBR0201171	FBR0201291	87	133
10.7	FBR0201172	FBR0201292	94	142
10.8	FBR0201173	FBR0201293	94	142
10.9	FBR0201174	FBR0201294	94	142

Unit : mm



## Parallel shank jobber drill

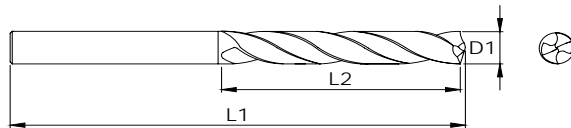


Diameter	Bright	TiN Coated	Flute Length	Overall Length
ØD1	EDP No	EDP No	L2	L1
11.0	FBR0201175	FBR0201295	94	142
11.1	FBR0201176	FBR0201296	94	142
11.2	FBR0201177	FBR0201297	94	142
11.3	FBR0201178	FBR0201298	94	142
11.4	FBR0201179	FBR0201299	94	142
11.5	FBR0201180	FBR0201300	94	142
11.6	FBR0201181	FBR0201301	94	142
11.7	FBR0201182	FBR0201302	94	142
11.8	FBR0201183	FBR0201303	94	142
11.9	FBR0201184	FBR0201304	101	151
12.0	FBR0201185	FBR0201305	101	151
12.1	FBR0201186	FBR0201306	101	151
12.2	FBR0201187	FBR0201307	101	151
12.3	FBR0201188	FBR0201308	101	151
12.4	FBR0201189	FBR0201309	101	151
12.5	FBR0200542	FBR0201310	101	151
12.6	FBR0201190	FBR0201311	101	151
12.7	FBR0201191	FBR0201312	101	151
12.8	FBR0201192	FBR0201313	101	151
12.9	FBR0201193	FBR0201314	101	151
13.0	FBR0201194	FBR0201315	101	151

Unit : mm



## Parallel shank jobber drill



Diameter	Bright	TiN Coated	Flute Length	Overall Length
ØD1	EDP No	EDP No	L2	L1
1.0	FBR0200546	FBR0201428	12	34
1.1	FBR0201316	FBR0201429	14	36
1.2	FBR0201317	FBR0201430	16	38
1.3	FBR0201318	FBR0201431	16	38
1.4	FBR0200547	FBR0201432	18	40
1.5	FBR0200548	FBR0201433	18	40
1.6	FBR0201319	FBR0201434	20	43
1.7	FBR0201320	FBR0201435	20	43
1.8	FBR0200549	FBR0201436	22	46
1.9	FBR0201321	FBR0201437	22	46
2	FBR0201322	FBR0201438	24	49
2.1	FBR0201323	FBR0201439	24	49
2.2	FBR0201324	FBR0201440	27	53
2.3	FBR0201325	FBR0201441	27	53
2.4	FBR0201326	FBR0201442	30	57
2.5	FBR0201327	FBR0201443	30	57
2.6	FBR0201328	FBR0201444	30	57
2.7	FBR0201329	FBR0201445	33	61
2.8	FBR0201330	FBR0201446	33	61
2.9	FBR0201331	FBR0201447	33	61
3	FBR0201332	FBR0201448	33	61
3.1	FBR0201333	FBR0201449	36	65
3.2	FBR0201334	FBR0201450	36	65
3.3	FBR0201335	FBR0201451	36	65
3.4	FBR0201336	FBR0201452	39	70

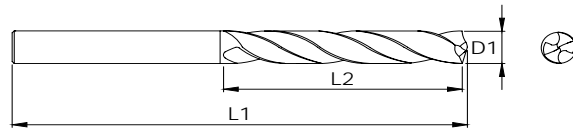
Unit : mm

Diameter	Bright	TiN Coated	Flute Length	Overall Length
ØD1	EDP No	EDP No	L2	L1
3.5	FBR0200550	FBR0201453	39	70
3.6	FBR0201337	FBR0201454	39	70
3.7	FBR0201338	FBR0201455	39	70
3.8	FBR0201339	FBR0201456	43	75
3.9	FBR0201340	FBR0201457	43	75
4.0	FBR0200551	FBR0201458	43	75
4.1	FBR0201341	FBR0201459	43	75
4.2	FBR0200552	FBR0201460	43	75
4.3	FBR0201342	FBR0201461	47	80
4.4	FBR0201343	FBR0201462	47	80
4.5	FBR0201344	FBR0201463	47	80
4.6	FBR0201345	FBR0201464	47	80
4.7	FBR0201346	FBR0201465	47	80
4.8	FBR0201347	FBR0201466	52	86
4.9	FBR0201348	FBR0201467	52	86
5	FBR0200553	FBR0201468	52	86
5.1	FBR0201349	FBR0201469	52	86
5.2	FBR0201350	FBR0201470	52	86
5.3	FBR0201351	FBR0201471	52	86
5.4	FBR0201352	FBR0201472	57	93
5.5	FBR0201353	FBR0201473	57	93
5.6	FBR0201354	FBR0201474	57	93
5.7	FBR0201355	FBR0201475	57	93
5.8	FBR0201356	FBR0201476	57	93
5.9	FBR0201357	FBR0201477	57	93

Unit : mm



## Parallel shank jobber drill



Diameter	Bright	TiN Coated	Flute Length	Overall Length
ØD1	EDP No	EDP No	L2	L1
6	FBR0200554	FBR0201478	57	93
6.1	FBR0201358	FBR0201479	63	101
6.2	FBR0201359	FBR0201480	63	101
6.3	FBR0201360	FBR0201481	63	101
6.4	FBR0201361	FBR0201482	63	101
6.5	FBR0201362	FBR0201483	63	101
6.6	FBR0201363	FBR0201484	63	101
6.7	FBR0201364	FBR0201485	63	101
6.8	FBR0201365	FBR0201486	69	109
6.9	FBR0201366	FBR0201487	69	109
7.0	FBR0201367	FBR0201488	69	109
7.1	FBR0201368	FBR0201489	69	109
7.2	FBR0201369	FBR0201490	69	109
7.3	FBR0201370	FBR0201491	69	109
7.4	FBR0201371	FBR0201492	69	109
7.5	FBR0201372	FBR0201493	69	109
7.6	FBR0201373	FBR0201494	75	117
7.7	FBR0201374	FBR0201495	75	117
7.8	FBR0201375	FBR0201496	75	117
7.9	FBR0201376	FBR0201497	75	117
8	FBR0201377	FBR0201498	75	117
8.1	FBR0201378	FBR0201499	75	117
8.2	FBR0201379	FBR0201500	75	117
8.3	FBR0201380	FBR0201501	75	117
8.4	FBR0201381	FBR0201502	75	117

Unit : mm

Diameter	Bright	TiN Coated	Flute Length	Overall Length
ØD1	EDP No	EDP No	L2	L1
8.5	FBR0201382	FBR0201503	75	117
8.6	FBR0201383	FBR0201504	81	125
8.7	FBR0201384	FBR0201505	81	125
8.8	FBR0201385	FBR0201506	81	125
8.9	FBR0201386	FBR0201507	81	125
9	FBR0201387	FBR0201508	81	125
9.1	FBR0201388	FBR0201509	81	125
9.2	FBR0201389	FBR0201510	81	125
9.3	FBR0201390	FBR0201511	81	125
9.4	FBR0201391	FBR0201512	81	125
9.5	FBR0201392	FBR0201513	81	125
9.6	FBR0201393	FBR0201514	87	133
9.7	FBR0201394	FBR0201515	87	133
9.8	FBR0201395	FBR0201516	87	133
9.9	FBR0201396	FBR0201517	87	133
10.0	FBR0201397	FBR0201518	87	133
10.1	FBR0201398	FBR0201519	87	133
10.2	FBR0201399	FBR0201520	87	133
10.3	FBR0201400	FBR0201521	87	133
10.4	FBR0201401	FBR0201522	87	133
10.5	FBR0201402	FBR0201523	87	133
10.6	FBR0201403	FBR0201524	87	133
10.7	FBR0201404	FBR0201525	94	142
10.8	FBR0201405	FBR0201526	94	142
10.9	FBR0201406	FBR0201527	94	142

Unit : mm



## Parallel shank jobber drill

HSS  
Co

DIN  
338

IS  
5101

ISO  
235

BS  
328

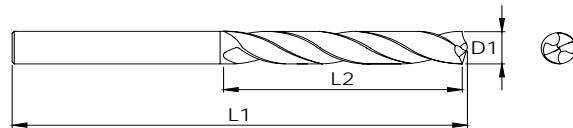
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S

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135°

30°

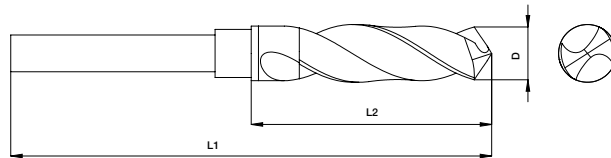


Diameter	Bright	TiN Coated	Flute Length	Overall Length
ØD1	EDP No	EDP No	L2	L1
11	FBR0201407	FBR0201528	94	142
11.1	FBR0201408	FBR0201529	94	142
11.2	FBR0201409	FBR0201530	94	142
11.3	FBR0201410	FBR0201531	94	142
11.4	FBR0201411	FBR0201532	94	142
11.5	FBR0201412	FBR0201533	94	142
11.6	FBR0201413	FBR0201534	94	142
11.7	FBR0201414	FBR0201535	94	142
11.8	FBR0201415	FBR0201536	94	142
11.9	FBR0201416	FBR0201537	101	151
12	FBR0201417	FBR0201538	101	151
12.1	FBR0201418	FBR0201539	101	151
12.2	FBR0201419	FBR0201540	101	151
12.3	FBR0201420	FBR0201541	101	151
12.4	FBR0201421	FBR0201542	101	151
12.5	FBR0201422	FBR0201543	101	151
12.6	FBR0201423	FBR0201544	101	151
12.7	FBR0201424	FBR0201545	101	151
12.8	FBR0201425	FBR0201546	101	151
12.9	FBR0201426	FBR0201547	101	151
13.0	FBR0201427	FBR0201548	101	151

Unit : mm



## Reduced shank drill



Diameter	EDP No	Flute Length	Overall Length	Shank Diameter
Ø D1		L2	L1	
13.5	FBR0200479	76	152	1/2"
14	FBR0200461	76	152	1/2"
14.5	FBR0200480	76	152	1/2"
15	FBR0200462	76	152	1/2"
15.5	FBR0200481	76	152	1/2"
16	FBR0200463	76	152	1/2"
16.5	FBR0200482	76	152	1/2"
17	FBR0200464	76	152	1/2"
17.5	FBR0200483	76	152	1/2"
18	FBR0200465	76	152	1/2"
18.5	FBR0200484	76	152	1/2"
19	FBR0200466	76	152	1/2"
19.5	FBR0200485	76	152	1/2"
20	FBR0200467	76	152	1/2"
20.5	FBR0200486	76	152	1/2"
21	FBR0200469	76	152	1/2"
21.5	FBR0200487	76	152	1/2"

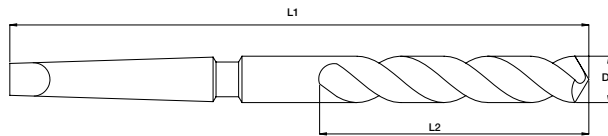
Unit : mm

Diameter	EDP No	Flute Length	Overall Length	Shank Diameter
Ø D1		L2	L1	
22	FBR0200470	76	152	1/2"
22.5	FBR0200488	76	152	1/2"
23	FBR0200471	76	152	1/2"
23.5	FBR0200489	76	152	1/2"
24	FBR0200490	76	152	1/2"
24.5	FBR0200491	76	152	1/2"
25	FBR0200492	76	152	1/2"
25.5	FBR0200493	76	152	1/2"
26	FBR0200472	76	152	1/2"
26.5	FBR0200494	76	152	1/2"
27	FBR0200495	76	152	1/2"
27.5	FBR0200496	76	152	1/2"
28	FBR0200473	76	152	1/2"
28.5	FBR0200497	76	152	1/2"
29	FBR0200498	76	152	1/2"
29.5	FBR0200499	76	152	1/2"
30	FBR0200500	76	152	1/2"

Unit : mm



## Morse taper shank drill



Diameter	EDP No	Flute Length	Overall Length	Morse Taper Shank Number
ØD1		L2	L1	
8	FBR0200198	75	156	MT-1
8.5	FBR0200199	75	156	MT-1
9	FBR0200200	81	162	MT-1
9.5	FBR0200201	81	162	MT-1
10	FBR0200204	87	168	MT-1
10.5	FBR0200206	87	168	MT-1
11	FBR0200208	94	175	MT-2
11.5	FBR0200210	94	175	MT-2
12	FBR0200116	101	182	MT-2
12.5	FBR0200212	101	182	MT-2
13	FBR0200117	101	182	MT-2
13.5	FBR0200214	108	189	MT-2
14	FBR0200119	108	189	MT-2
14.5	FBR0200216	114	212	MT-2
15	FBR0200121	114	212	MT-2
15.5	FBR0200217	120	218	MT-2
16	FBR0200123	120	218	MT-2

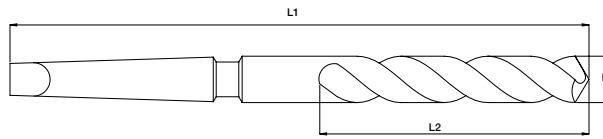
Unit : mm

Diameter	EDP No	Flute Length	Overall Length	Morse Taper Shank Number
ØD1		L2	L1	
16.5	FBR0200218	125	223	MT-2
17	FBR0200219	125	223	MT-2
17.5	FBR0200220	130	228	MT-2
18	FBR0200125	130	228	MT-2
18.5	FBR0200221	135	233	MT-2
19	FBR0200126	135	233	MT-2
19.50	FBR0200222	140	238	MT-2
20	FBR0200128	140	238	MT-2
20.5	FBR0200223	145	243	MT-2
21	FBR0200130	145	243	MT-2
21.5	FBR0200224	150	248	MT-2
22	FBR0200308	150	248	MT-2
22.5	FBR0200309	155	253	MT-2
23	FBR0200225	155	253	MT-2
23.5	FBR0200226	155	276	MT-2
24	FBR0200132	160	281	MT-2
24.5	FBR0200227	160	281	MT-2

Unit : mm



## Morse taper shank drill



Diameter	EDP No	Flute Length	Overall Length	Morse Taper Shank Number
ØD1		L2	L1	
25	FBR0200133	160	281	MT-2
25.5	FBR0200228	165	286	MT-2
26	FBR0200135	165	286	MT-2
26.5	FBR0200229	165	286	MT-3
27	FBR0200230	170	291	MT-3
27.5	FBR0200231	170	291	MT-3
28	FBR0200136	170	291	MT-3
28.5	FBR0200232	175	296	MT-3
29	FBR0200137	175	296	MT-3
29.5	FBR0200310	175	296	MT-3
30	FBR0200139	175	296	MT-3
30.5	FBR0200233	180	301	MT-3
31	FBR0200234	180	301	MT-3
31.5	FBR0200235	180	301	MT-3
32	FBR0200140	185	334	MT-3
32.5	FBR0200236	185	334	MT-3
33	FBR0200237	185	334	MT-3
33.5	FBR0200238	185	334	MT-3

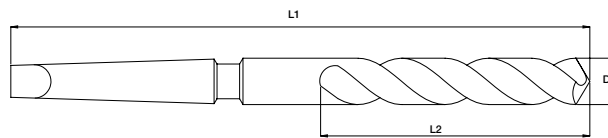
Unit : mm

Diameter	EDP No	Flute Length	Overall Length	Morse Taper Shank Number
ØD1		L2	L1	
34	FBR0200239	190	339	MT-3
34.5	FBR0200240	190	339	MT-3
35	FBR0200241	190	339	MT-3
35.5	FBR0200242	190	339	MT-3
36	FBR0200243	195	344	MT-3
36.5	FBR0200244	195	344	MT-3
37	FBR0200245	195	344	MT-3
37.5	FBR0200246	195	344	MT-3
38	FBR0200247	200	349	MT-3
38.5	FBR0200248	200	349	MT-3
39	FBR0200249	200	349	MT-3
39.5	FBR0200250	200	349	MT-3
40	FBR0200251	200	349	MT-3
40.5	FBR0200252	205	354	MT-3
41	FBR0200253	205	354	MT-3
41.5	FBR0200254	205	354	MT-3
42	FBR0200255	205	354	MT-3
43	FBR0200256	210	359	MT-3

Unit : mm



## Morse taper shank drill



Diameter	EDP No	Flute Length	Overall Length	Morse Taper Shank Number
Ø D1		L2	L1	
44	FBR0200257	210	359	MT-3
45	FBR0200258	210	359	MT-3
46	FBR0200259	215	364	MT-3
47	FBR0200260	215	364	MT-3
48	FBR0200261	220	369	MT-3
49	FBR0200262	220	369	MT-3
50	FBR0200263	220	369	MT-4
51	FBR0200922	225	412	MT-5
52	FBR0200921	225	412	MT-5
53	FBR0200923	225	412	MT-5
54	FBR0200533	230	417	MT-5
55	FBR0200639	230	417	MT-5
56	FBR0200924	230	417	MT-5
57	FBR0200925	235	422	MT-5
58	FBR0200926	235	422	MT-5
59	FBR0200927	235	422	MT-5

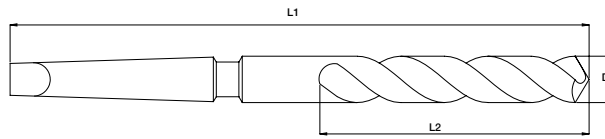
Unit : mm

Diameter	EDP No	Flute Length	Overall Length	Morse Taper Shank Number
Ø D1		L2	L1	
60	FBR0200525	235	422	MT-5
61	FBR0200928	240	427	MT-5
62	FBR0200929	240	427	MT-5
63	FBR0200930	240	427	MT-5
64	FBR0200931	245	432	MT-5
65	FBR0200526	245	432	MT-5
66	FBR0200468	245	432	MT-5
67	FBR0200932	245	432	MT-5
68	FBR0200933	250	437	MT-5
69	FBR0200934	250	437	MT-5
70	FBR0200527	250	437	MT-5
71	FBR0200935	250	437	MT-5
72	FBR0200936	255	442	MT-5
73	FBR0200920	255	442	MT-5
74	FBR0200937	255	442	MT-5
75	FBR0200528	255	442	MT-5

Unit : mm



## Morse taper shank drill



Diameter	EDP No	Flute Length	Overall Length	Morse Taper Shank Number
ØD1		L2	L1	
3/8"	FBR0200202	87	168	MT-1
25/64"	FBR0200203	87	168	MT-1
13/32"	FBR0200205	87	168	MT-1
27/64"	FBR0200207	94	175	MT-2
7/16"	FBR0200209	94	175	MT-2
15/32"	FBR0200211	101	182	MT-2
1/2"	FBR0200118	101	182	MT-2
17/32"	FBR0200213	108	189	MT-2
35/64"	FBR0200215	108	189	MT-2
9/16"	FBR0200120	114	212	MT-2
5/8"	FBR0200122	120	218	MT-2
11/16"	FBR0200124	130	228	MT-2

Unit : mm

Diameter	EDP No	Flute Length	Overall Length	Morse Taper Shank Number
ØD1		L2	L1	
3/4"	FBR0200127	140	238	MT-2
13/16"	FBR0200129	145	243	MT-2
7/8"	FBR0200131	150	248	MT-2
1"	FBR0200134	165	286	MT-2
1.1/8"	FBR0200138	175	296	MT-3
1-1/4"	FBR0200312	185	306	MT-3
1-3/8"	FBR0200475	190	339	MT-4
1-7/16"	FBR0200476	195	344	MT-4
1-1/2"	FBR0200477	200	349	MT-4
1-5/8"	FBR0200938	205	354	MT-4
1-3/4"	FBR0200939	210	359	MT-4
2"	FBR0200478	225	374	MT-4

Unit : mm



## Drill case sets



EDP No.	Specification
FBR0200531	HSS DRILLS CASE SET 1.0 TO 13.0 MM (25 PCs)
FBR0200532	HSS DRILLS CASE SET 2.0 TO 8.0 MM (13 PCs)
FBR0200543	HSS DRILLS CASE SET 1/16" TO 1/4" (13 PCs)
FBR0200545	HSS DRILLS CASE SET 1/16" TO 1/2" (29 PCs)



**TABLE OF CUTTING SPEEDS - FRACTIONAL SIZE DRILLS - HSS DRILL**

Vc (ft/min)	50	60	70	80	100
Vc (m/min)	15	18	21	24	30
Drill dia (inch)	Revolutions Per Minute (RPM)				
1/64"	12224	14656	17088	19520	24448
1/32"	6112	7328	8544	9760	12224
3/64"	4064	4896	5696	6528	8160
1/16"	3056	3664	4272	4880	6112
5/64"	2448	2928	3424	3904	4896
3/32"	2032	2448	2848	3264	4080
1/8"	1528	1832	2136	2440	3056
5/32"	1224	1464	1712	1952	2448
3/16"	1016	1224	1424	1632	2040
7/32"	872	1048	1224	1400	1744
1/4"	764	916	1068	1220	1528
5/16"	612	732	856	976	1224
3/8"	508	612	712	816	1020
7/16"	436	524	612	700	872
1/2"	382	458	534	670	764
9/16"	340	408	476	544	680
5/8"	306	366	428	488	612
11/16"	278	334	388	444	556
3/4"	254	306	356	408	510
13/16"	234	282	330	376	470
7/8"	218	262	306	350	436
15/16"	204	244	286	326	408
1"	191	229	267	305	382
1-2/8"	170	204	238	272	340
1-1/4"	153	183	214	244	306
1-1/2"	127	153	178	204	255
1-3/4"	109	131	153	175	218
2"	95	114	133	152	191
2-1/4"	85	102	119	136	170
2-1/2"	76	92	107	122	153
2-3/4"	69	83	97	111	139
3"	64	76	89	102	127
4"	48	57	67	76	95

HSS DRILLS



**TABLE OF CUTTING SPEEDS - METRIC SIZE DRILLS - HSS DRILL**

Vc (ft/min)	50	60	70	80	100
Vc (m/min)	15	18	21	24	30
Drill dia (mm)	Revolutions Per Minute				
0.5	9695	11634	13573	15512	19390
1	4847	5817	6786	7756	9695
1.5	3237	3884	4532	5179	6474
2	2427	2912	3397	3883	4854
2.5	1941	2329	2717	3105	3882
3	1617	1940	2264	2587	3234
4	1213	1455	1698	1940	2425
5	970	1164	1359	1553	1941
6	808	970	1132	1294	1617
7	693	832	970	1109	1386
8	606	728	849	970	1213
9	539	647	755	862	1078
10	485	582	679	776	970
11	441	529	617	706	882
12	404	485	566	647	808
13	373	448	522	597	746
14	346	416	485	554	693
15	323	388	453	554	693
16	303	364	424	485	606
17	285	342	399	456	571
18	269	323	377	431	539
19	255	306	357	408	511
20	242	291	340	388	485
21	231	277	323	370	462
22	220	265	309	353	441
23	211	253	295	337	422
24	202	242	283	323	404
25	194	233	272	310	388
26	186	224	261	298	373
27	180	216	252	287	359
30	162	194	226	259	323
33	147	176	206	235	294
36	135	162	189	216	270
39	124	149	174	199	249
42	116	139	162	185	231
45	108	129	151	172	216
48	101	121	141	162	202
51	95	114	133	152	190
56	87	104	121	139	173
61	80	95	111	127	159
65	75	90	104	119	149



## FEEDS FOR HSS TWIST DRILLS

Drills dia inch	Feed / rev inch	Drill dia inch	Feed mm / Rev
1/16 - 3/32	.0015 - .0025	1.6 - 3.0	0.04 - 0.06
1/8 - 5/32	.002 - .004	3.0 - 4.0	0.05 - 0.10
3/16 - 7/32	.003 - .006	4.0 - 5.5	0.075 - 0.15
1/4 - 5/16	.004 - .008	5.5 - 8.0	0.10 - 0.20
3/8 - 7/16	.006 - 0.10	8.0 - 11.0	0.15 - 0.25
1/2 - 9/16	.008 - .012	11.0 - 14.5	0.20 - 0.30
5/8 - 11/16	.009 - .013	14.5 - 17.5	0.23 - 0.33
3/4 - 13/16	.010 - .014	17.5 - 20.5	0.25 - 0.36
7/8 - 15/16	.011 - .015	20.5 - 24.0	0.28 - 0.38
1 - 1.1/8	.012 - .016	24.0 - 28.5	0.30 - 0.40
1.1/4 - 1.1/2	.014 - .018	28.5 - 38.0	0.35 - 0.45
over 1.1/2	.016 - .020	over 38.0	0.40 - 0.50
1/16 - 3/32	.002 - .0035	1.6 - 3.0	0.05 - 0.09
1/8 - 5/32	.0025 - .006	3.0 - 4.0	0.06 - 0.015
3/16 - 7/32	.004 - .009	4.0 - 5.5	0.10 - 0.23
1/4 - 5/16	.005 - .012	5.5 - 8.0	0.125 - 0.30
3/8 - 7/16	.0075 - .015	8.0 - 11.0	0.19 - 0.38
1/2 - 9/16	.010 - .018	11.0 - 14.5	0.25 - 0.45
5/8 - 11/16	.011 - .020	14.5 - 17.5	0.28 - 0.50
3/4 - 13/16	.0125 - .021	17.5 - 20.5	0.31 - 0.53
7/8 - 15/16	.0135 - .022	20.5 - 24.0	0.34 - 0.56
1 - 1.1/8	.015 - .024	24.0 - 28.5	0.38 - 0.60
1.1/4 - 1.1/2	.0175 - .027	28.5 - 38.0	0.44 - 0.68
over 1.1/2	.020 - .030	over 38.0	0.50 - 0.75

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